



USER MANUAL

AUTOMATIC DIE CUTTER 2000 MM

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	315/2	315/3		
40	400/2	400/3		

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IMPORTANT

Read this user manual and follow the instructions and warnings before operating this device.
Any modification or transformation performed on this machine may cause the loss of the manufacturer's guarantee and liability.
This manual must always remain close to the machine and visible to all operating and maintenance staff in the event that future consultation is necessary.

«CE» DECLARATION OF CONFORMITY

We, undersigned,

MLT ZI du Clos Marquet - Rue Michel Rondet - CS 70059 -
42 200 Saint-Chamond, France

The person(s) authorised to compile the technical documentation :

- **Gilles FURNON** : Product Manager, MLT

declare that the new machine subject to self-certification designated below :

Model :	F 120
Serial Number :	71103
Year of manufacture :	2018

is in accordance with :

- The regulatory provisions defined in Annex I to European Directive 2006/42/CE
- To the following directives and/or standards:
 - EN ISO 12100-1
 - EN ISO 12100-2
 - EN 60204-1
 - EN ISO 13250
 - EN ISO 13857
 - EN ISO 14121-1

A SAINT-CHAMOND,
PDG Groupe
Frédéric GUILLEMET
MLT
MINET LACING TECHNOLOGY SA
Z.I. du Clos Marquet - CS 70059
42400 SAINT-CHAMOND
Tél : 04 77 22 19 19 Fax : 04 77 31 49 81

What is the die cutter DC200?

Description

The pneumatic die cutter with motorised head allows conveyor belts to be cut in zigzag pattern, with ball screw activated by a stepper motor allowing the positioning control. Featuring pressure and die cutting time control and exchangeable cutting heads for different cutting geometries, with the possibility of programming diverse forward steps.

Support bench with material positioning guides.

This die cutter is especially designed to cut thermoplastic materials with interior tissue.

Technical Characteristics

	FRAME
Dimensions	2700 x 870 x 1160 (l x w x h)
Weight	313 Kg
Max. Thickness	8 mm
Voltage	2x 230
Power	0.20kW
Max. pressure	6 bar

	HEAD
Dimensions	245 x 205 x 440 (l x w x h)
Weight	30,6 Kg

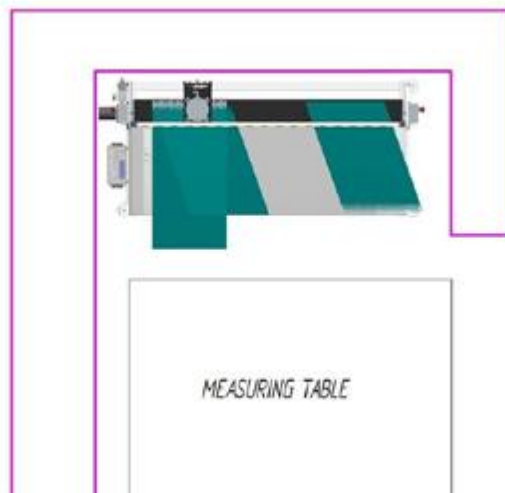
User Instructions

WARNING

THIS DEVICE MAY CAUSE A RISK TO HANDS AND ARMS WHICH CAN BE TRAPPED BY THE MOVEMENT OF THE CUTTING HEAD. A GREAT ATTENTION MUST ALSO BE PAID TO THE CUTTING HEAD AND THE SUPPORT PLATE, WHICH CAN ALSO BE DANGEROUS FOR THE MEMBERS.

Installation and connection:

Place the machine close to the measuring table, or at a short distance from it, to prevent the material to be cut from coming into contact with the floor.



Level and balance the machine by means of the regulation bolts on the rubber feet.

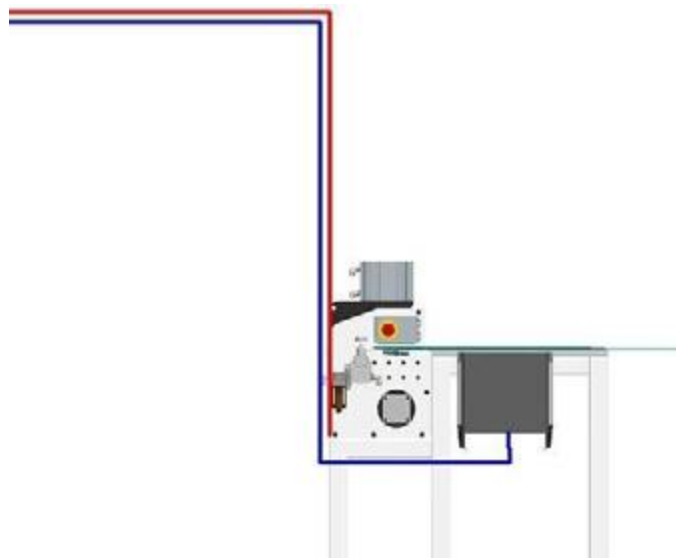




NOTE :
Air consumption is 220 litres/minute
Connect the power cable to the control board at 230v.



NOTE :
It is recommended to operate both air and power supplies by suspending them from above, to prevent the staff from tripping or falling.



Once the machine is connected to the power supply and supplied with air, turn on the machine using the ON switch.



Check that the regulator pressure is between 2 and 6 bar.



This adjusting device suffers a loss of air in order to keep the exact pressure constant.

SAFETY SYSTEMS AND MESSAGES



This die cutter has been equipped with the following safety systems :

EMERGENCY STOP

This system allows an emergency stop to be performed at any time using the two push buttons located at both ends of the bench.

MESSAGE: EMERGENCY BUTTON PRESSED

To deactivate it, unlock the push button.

TREAD BAR

This device does not allow engagement of the cutting head if the bar holding the belt is not lowered.

MESSAGE: CLAMP OPEN

USE: To deactivate this message, lower the bar and press START

DOOR OPEN

To deactivate it, lower the bar and press START.

MESSAGE: COVER OPEN

The door must be closed to deactivate it.

CYLINDER DETECTOR

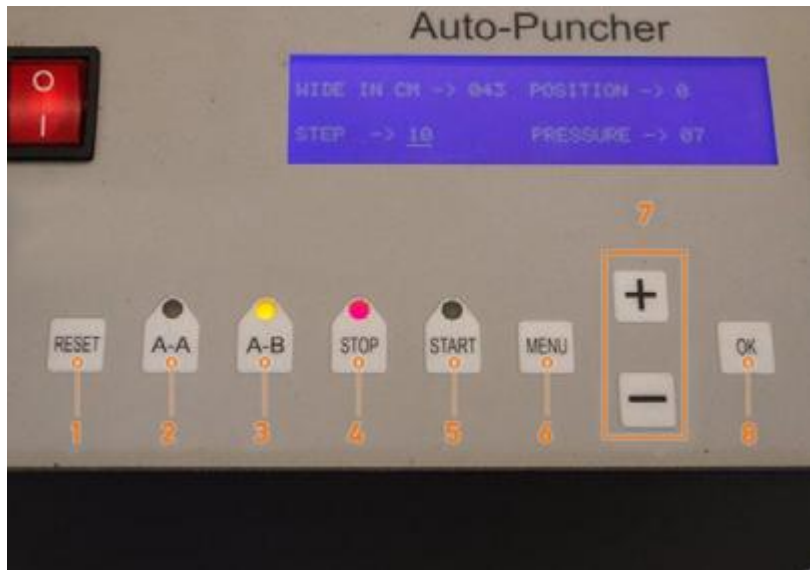
This device does not allow the head to move because it detects that the cutting cylinder is not raised. This can happen produced due to a lack of air or sensor failure.

MESSAGE: CYLINDER WRONG

To deactivate it, supply air to the machine or replace the sensor.

Programming :

It is necessary to know the function of the pushbuttons in the table to program the die cutter.



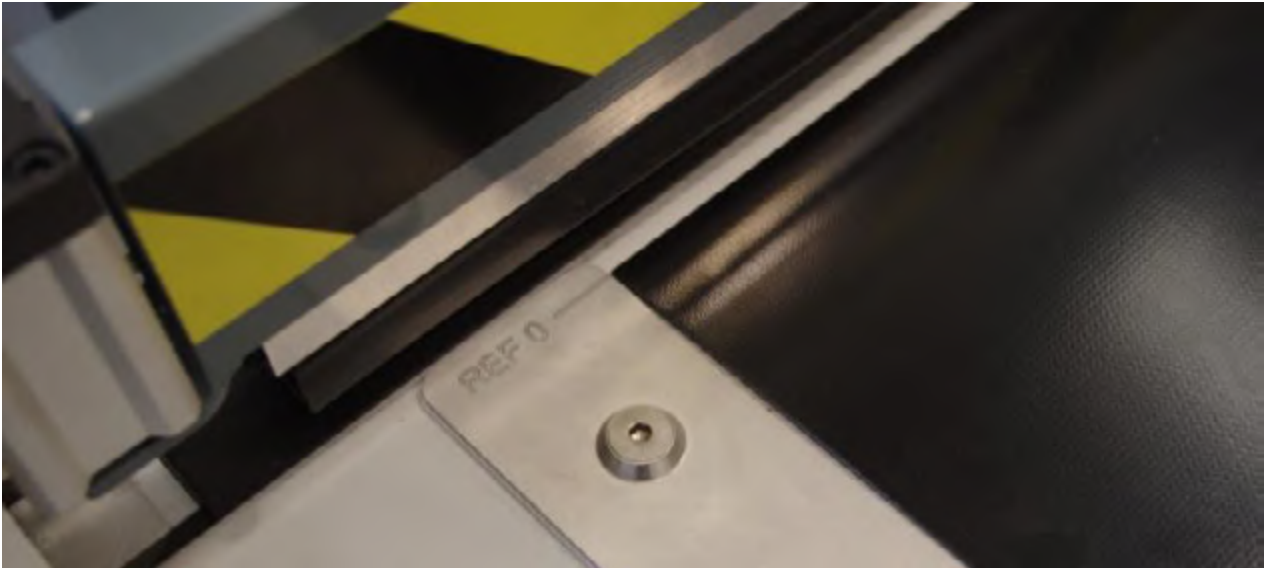
Number	Name
1	RESET This must be pressed after an emergency stop, or position the head at the starting point after STOP.
2	A-A - Selection of the A-A program This program is used in the majority of cases, to always operate on the left guide rail and cut the belts performing the first end with the coverage on top and the second end with the fabric on top, both for direct finger die cutting as well as finger-over-finger die cutting.
3	A-B - Selection of the A-B program This program is only used in cases of diagonal belts, or belts with a high profile, to operate the first end on the left guide rail and the second on the right guide rail, always with the coverage on top.
4	STOP It allows the cutting process to be halted at any moment, to change the time or cutting pressure, for example. By pressing START, it will continue the process without losing the positioning memory
5	START It starts the cutting process or acts to reboot following a stop.
6	MENU Use this button to jump from one programming field to another and thus amend the values: WIDTH IN CM STEP PRESSURE TIME
7	+ / - To increase or decrease the field values.
8	OK To validate the modified value. Any modification must always be validated.

Belt cutting measures for the different dies.

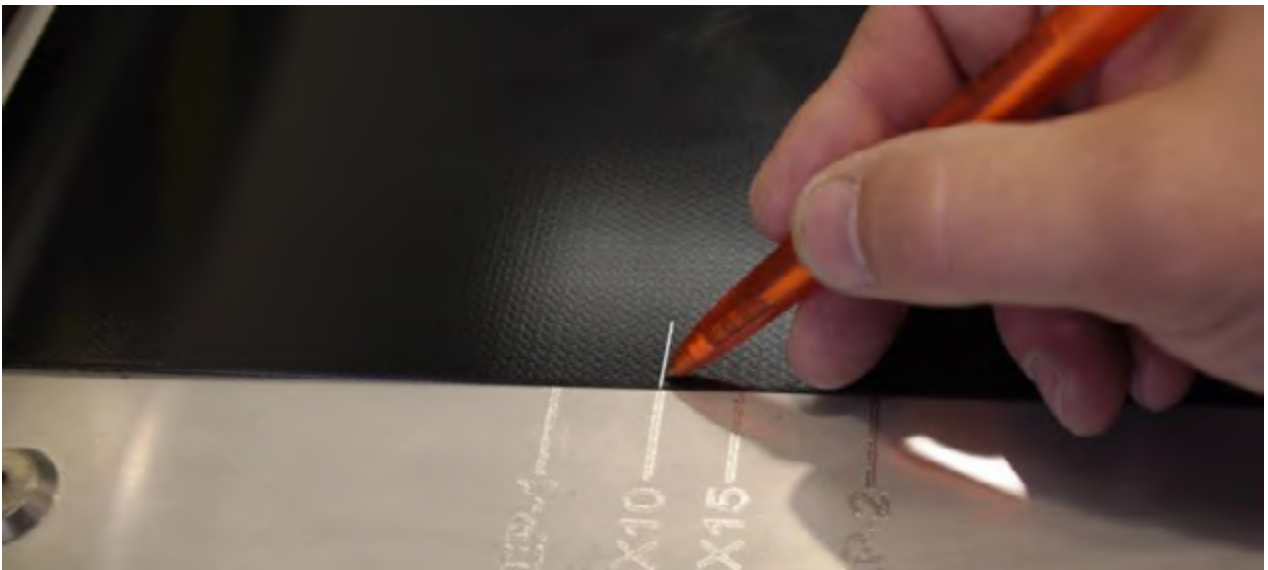
80 x 10 at 90°.....	100 mm. Longer
80 x 10 at 70°.....	100 mm. Longer
120 x 15 at 90°.....	130 mm. Longer
50 x 20 finger over finger 90°.....	120 mm. Longer

A-A simple die cutting tool

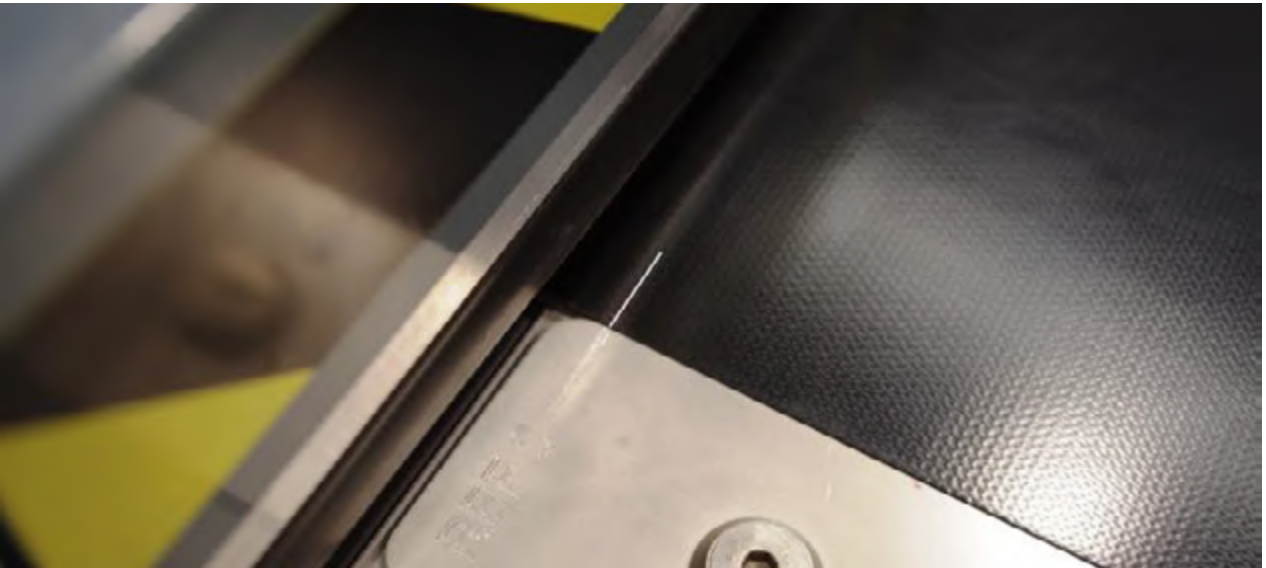
Place the first end of the belt on the left side by the guide rail with the coverage on top and position the end of the belt just by the «Ref 0». mark.



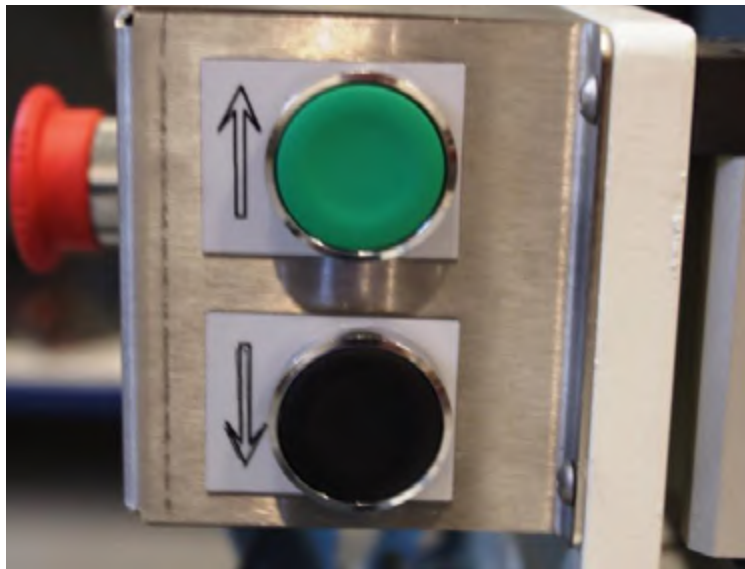
Then mark the measurement to input the relevant material with a pencil, according to the applicable die.



Place the belt under the tread bar until the measurement line matches up with «Ref 0» and make sure it is fully in contact with the guide rail.



Lower the tread bar by pressing the down button.



Select the function A-A if it is not activated.



Use the + / - buttons to adjust the width of the belt in centimetres and press OK.

Check that the STEP is correct. If not, use the MENU key to jump to the STEP field and input the desired value with + / - and then OK.

NOTE :

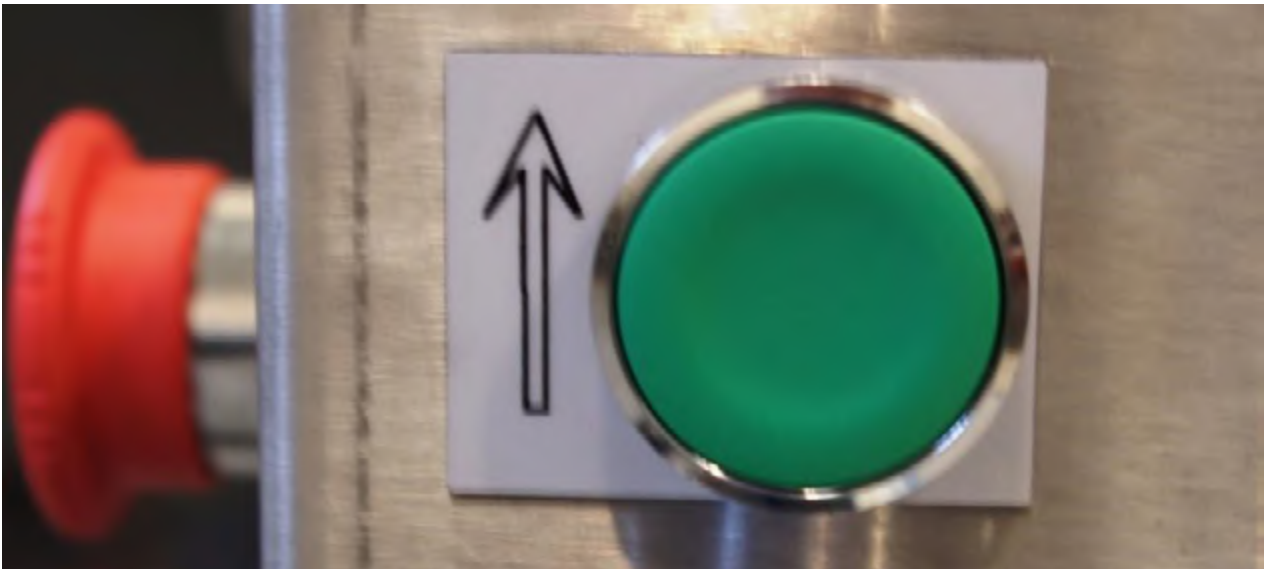
The values programmed will not be lost, even when the equipment is switched off. The program always stores the last values input.

Press START to begin cutting at the first end.

NOTE :

During the cutting process, no programmed value may be changed, except the cutting time. To do so, press STOP and change that value, and START to continue.

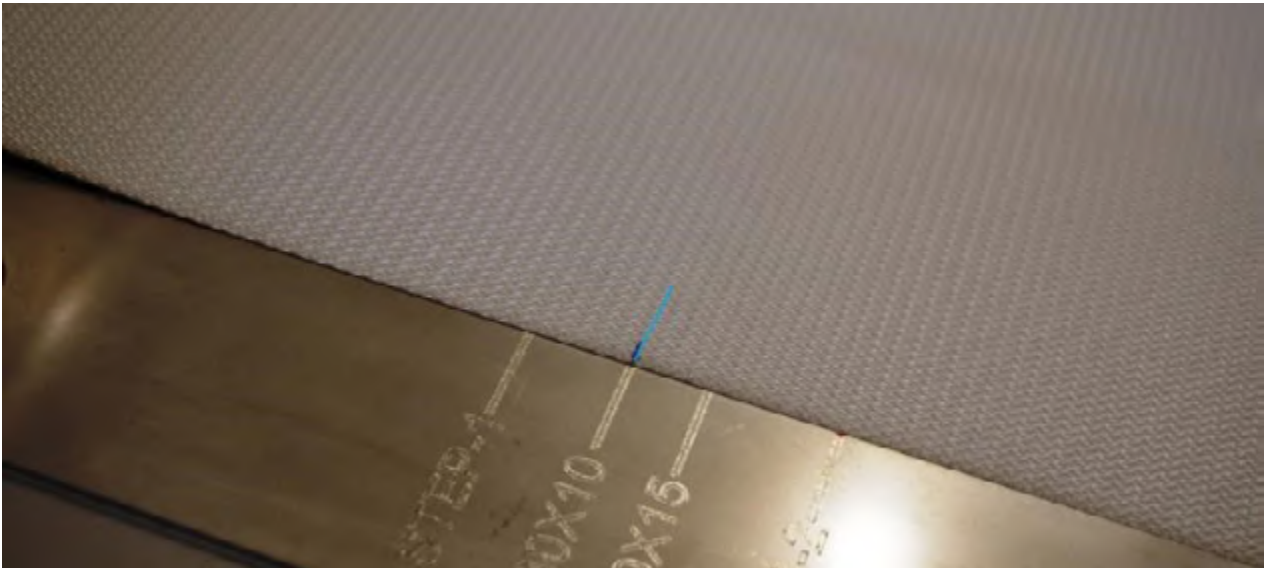
Once the first cut is completed, release the belt by pressing the raise bar button.



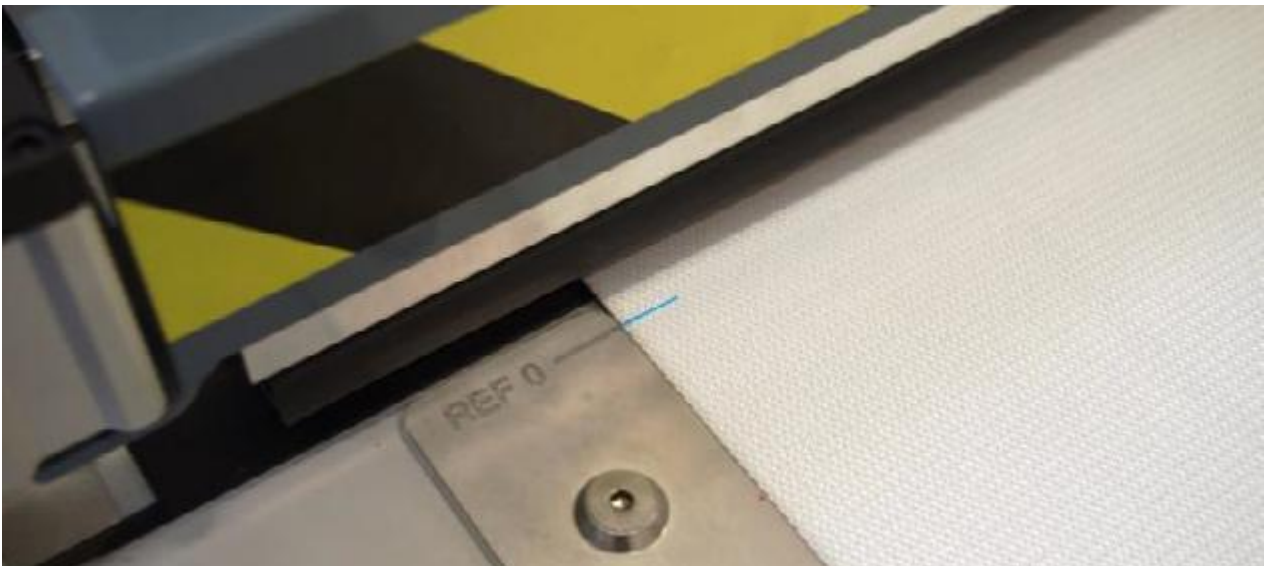
Place the second end of the belt on the left side by the guide rail, but the opposite way, that is, with the top cover down, and position the end of the belt just on the «Ref 0» mark.



Then mark the measurement with a pencil to feed in the materials according to the die.



Next, feed in the belt under the holding bar until the mark aligns with «REF 0» and make sure it is fully in contact with the guide rail.



Lower the tread bar using the down push button and press START.
Once the operation is completed, release the material by raising the tread bar.

A-A double die cutting tool

NOTE :

For this type of die cutting, it requires prior separation of the fabrics with the ply separator device PLYS-15

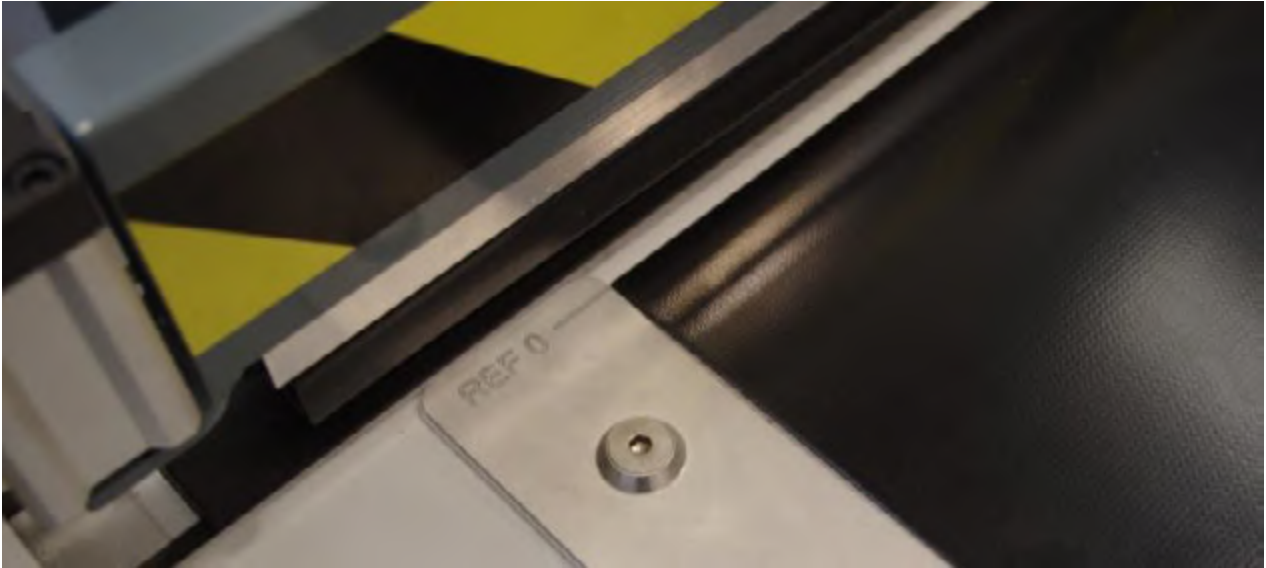
Separate the fabrics of the 130 mm. belt at both ends. Mount the 50x20 mm die.

Check that the A-A function is activated.

Program STEP 20 mm. and the required width in centimetres.

Regulate the pressure to 3 bar, as the cutting pressure is less due to the length of the blades.

Place the first end of the belt on the left side, by the guide rail, and place the end of the belt just on the «Ref 0» mark.



Next pencil mark the two measurements to insert the material for the stops STEP-1 and STEP-2.



Then insert the material up to the first mark STEP-1.



Lower the tread bar using the push button and press START.
Once the first cut is completed, remove the excess material.



Place the plate between the two cloths up to the end of the separator cut.

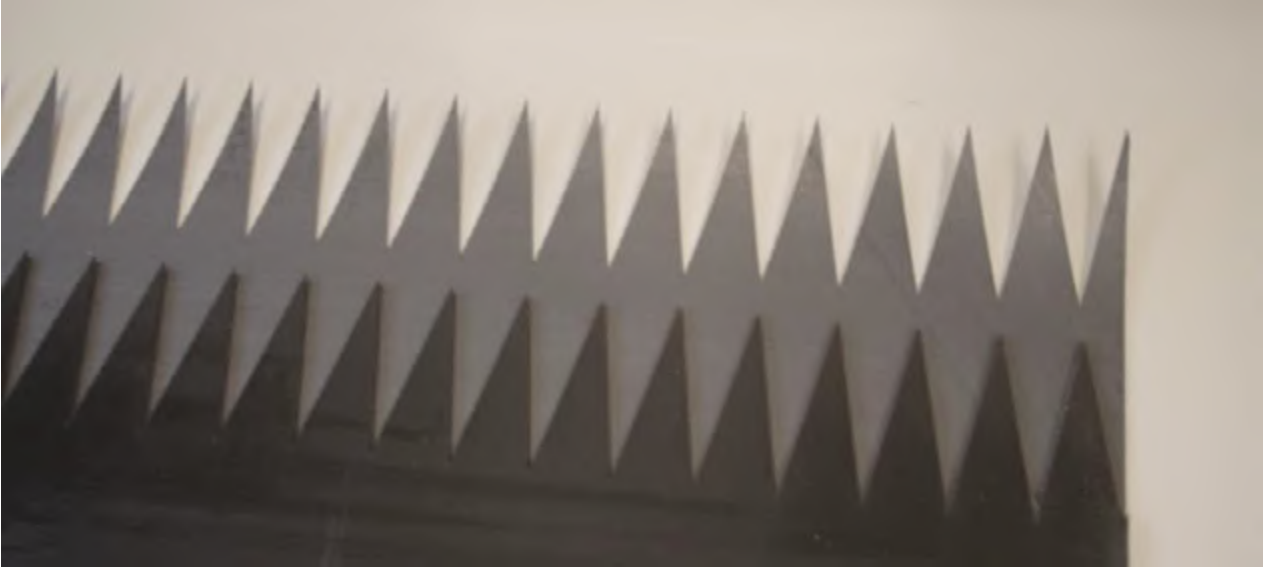


Once the plate has been placed inside, insert the material up to the second mark STEP-2.



Reduce the cutting pressure to 2 bar, as the second cut will only cut the top fabric. Lower the tread bar and press START.

By finishing the second cut, withdraw the surplus material and the plate.

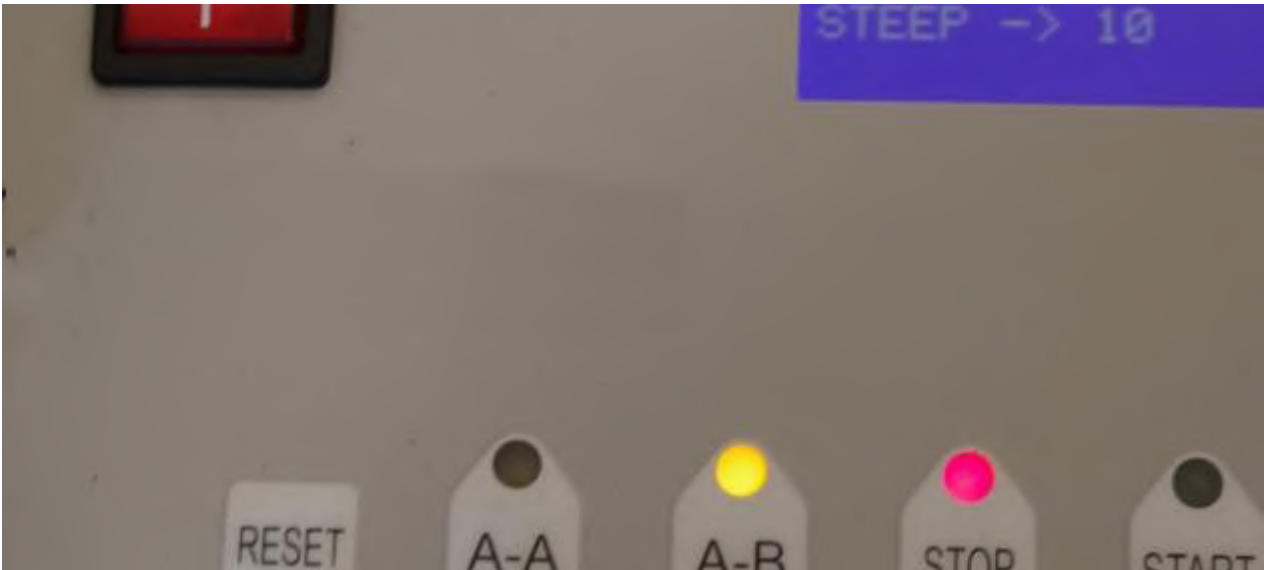


Place the second end of the belt with the opposing face upward on the same left side and repeat the same operations.



A-B cutting tool for 90-degree high belts

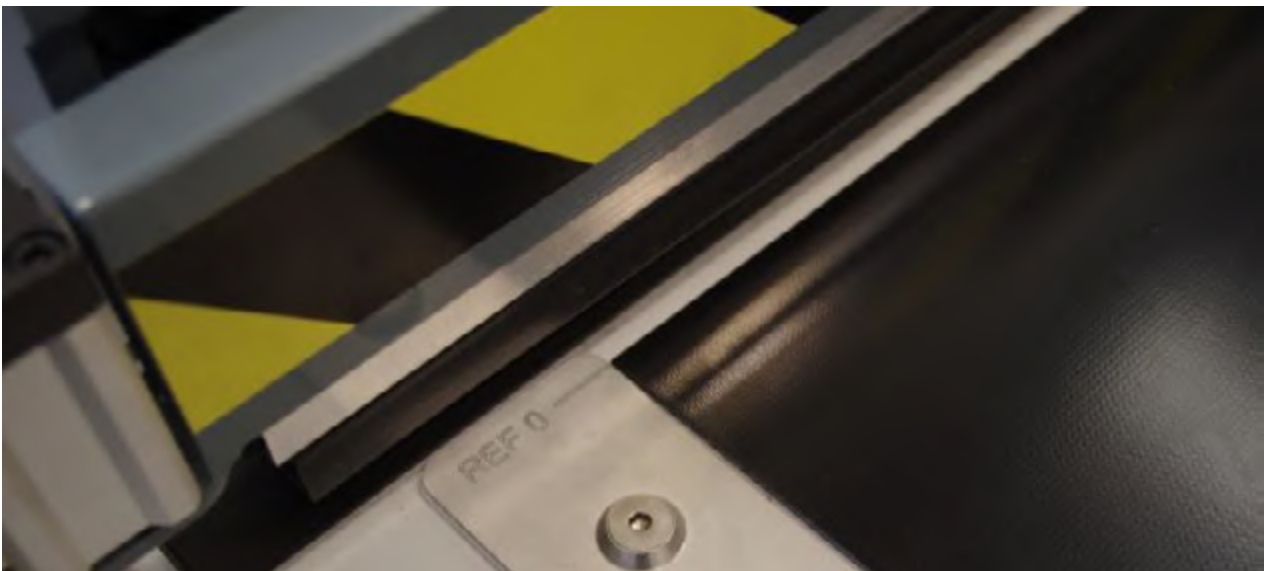
Select function A-B if it is not activated.



Mount the die chosen: 80x10 or 120x15.

Program the relevant gauge for the die mounted and program the width in centimetres. Adjust the cutting pressure according to the hardness of the belt and the blade length.

Place the first end of the belt on the left side by the guide rail and then position the end of the belt by the «Ref 0» mark, in order to mark the material insertion measurement according to the die you select.



Then place the belt under the holding bar until the mark made aligns with «Ref 0» and make sure that it is fully in contact with the guide rail.

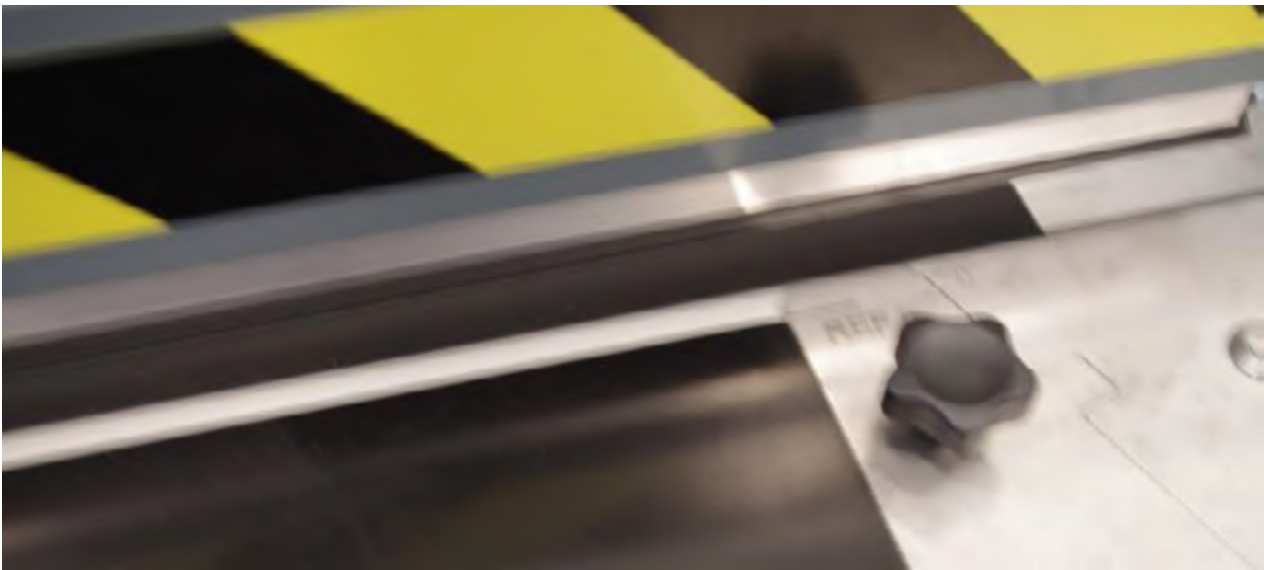
Lower the tread bar using the down push button.

Using the + / - buttons, adjust the belt width in centimetres and press OK.
check that the STEP is correct and, if not, using the MENU key, select the field STEP and input the desired value with + / - and then OK.

Press START to start cutting at the first end.

Once the first cut has been made, the head must be positioned on 0 opposite the control panel. Then release the strip by pressing the UP button on the bar.

Place the second end of the belt on the right side next to the right guide rail and, with the top cover also on top, position the final end of the belt just at the «Ref 0» mark, to mark the measurement line for insertion of the relevant material according to the die select.



Then place the belt under the holding bar until the mark made matches «Ref 0» and make sure it is fully in contact with the guide rail.

Lower the tread bar using the down push button and press START.

Once the operation has ended, release the material by raising the pressing bar.

A-B 70-degree diagonal cutting tool

Select the A-B function if it is not activated.

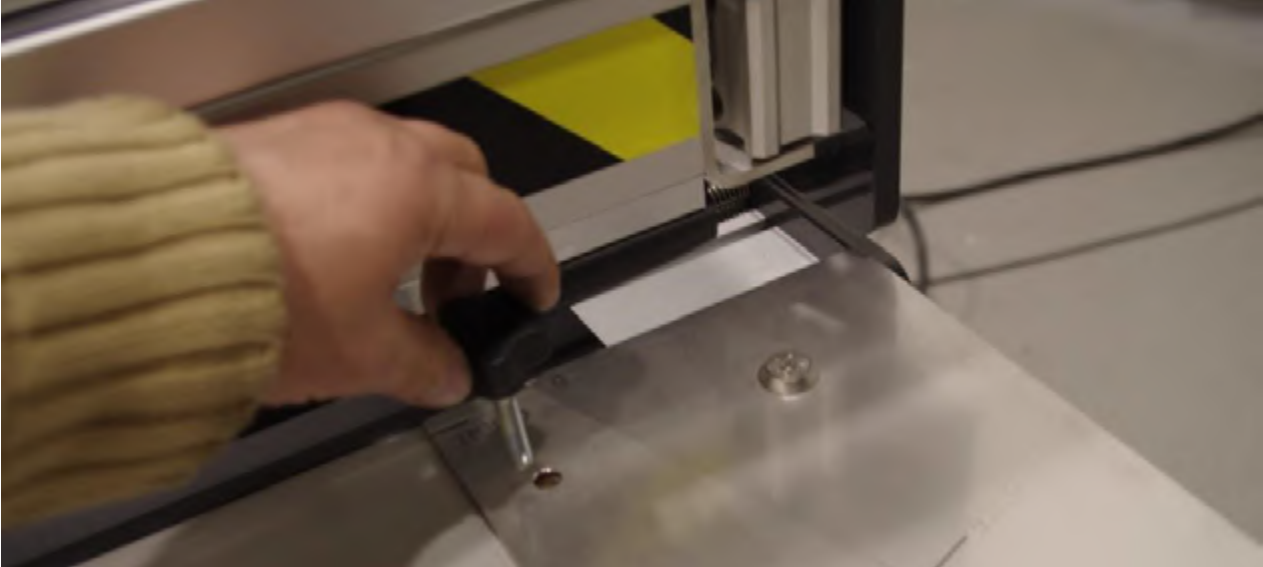
Mount die 80x10 70°

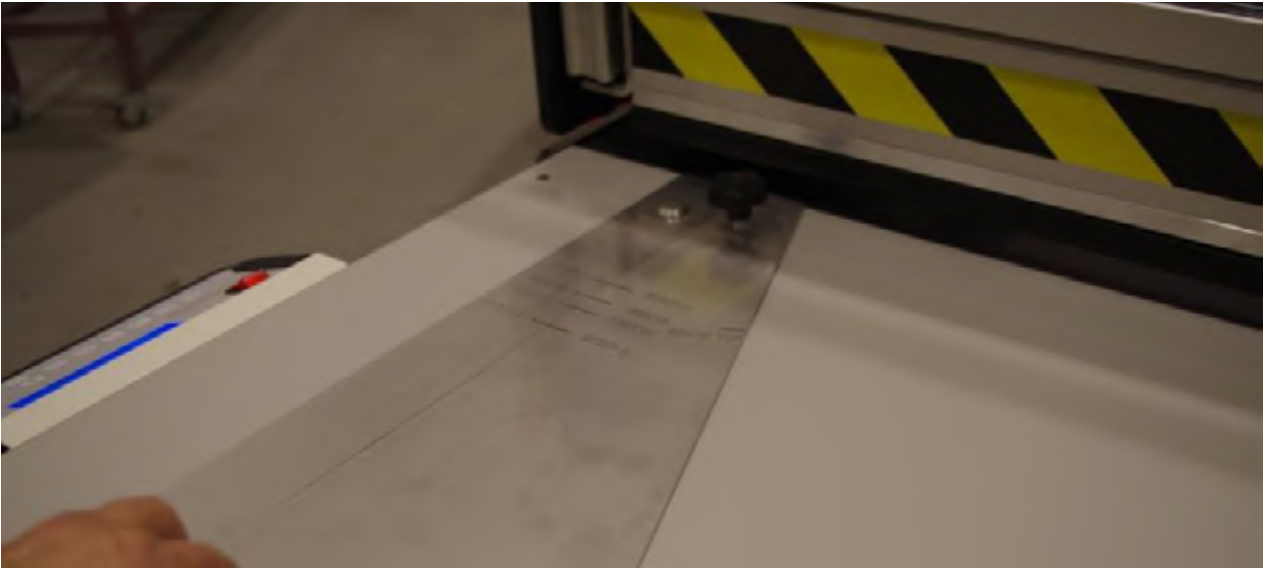
Program the STEP to 10mm

Adjust the cutting pressure to 4/6 bar

Program the width in centimetres, 10% wider than the belt width. Example: if the belt is 400mm. wide, program 44 instead of 40.

Remove the diagonal guide on the right side and place it on the left side.

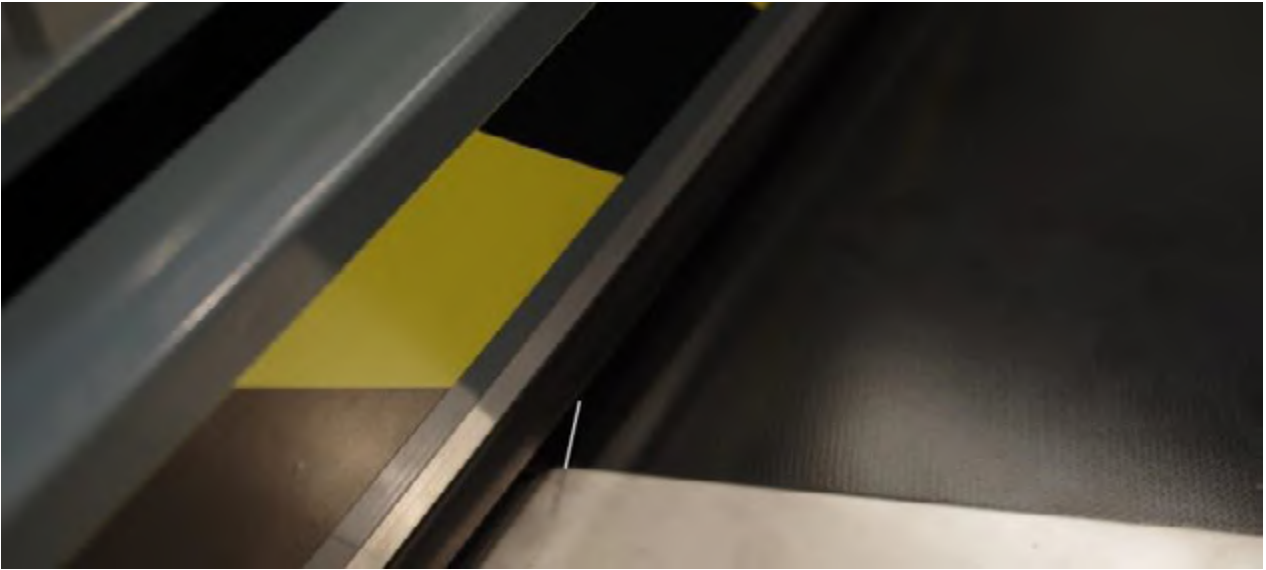




Place the belt that has already been cut in diagonal at 70° along with the supplementary guide to mark from «Ref 0» with the advance measurement of 80x10 at 70°.



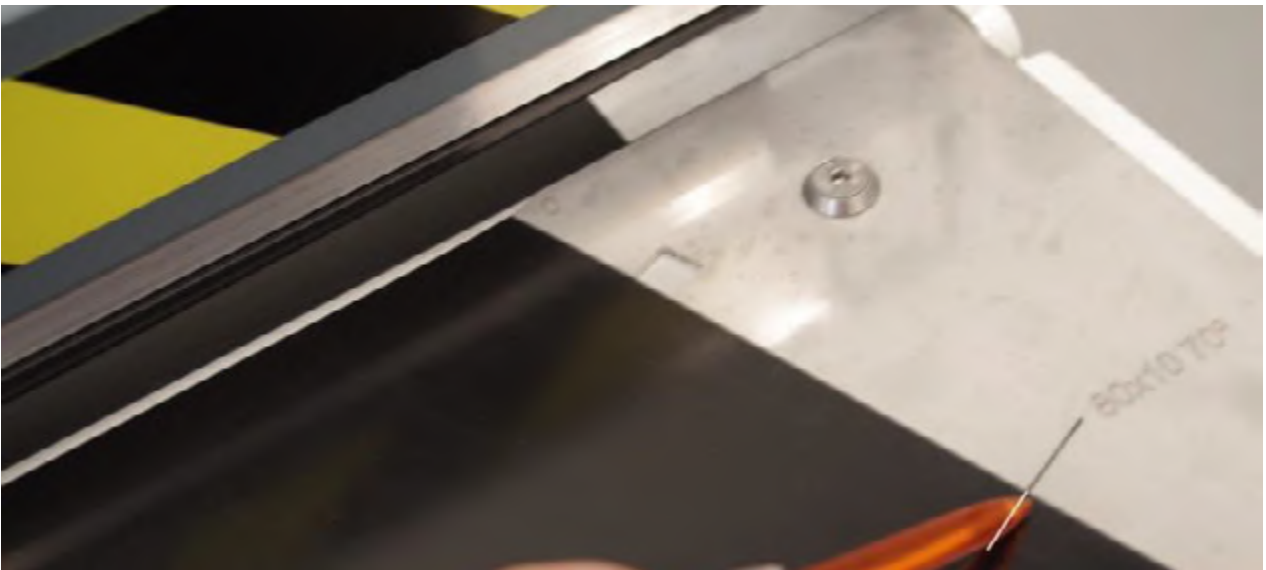
Then insert the belt until it aligns with the mark made at point «Ref 0»



Lower the tread bar using the down push button and press START.

Once the first cut is complete, note that the head will be positioned at point 0 of the opposite end of the control board. By reaching that point, release the belt by pressing the raise bar button.

Place the second end of the belt on the right side, by the right diagonal guide and with the coverage also on top, and position the far end of the belt just at the «Ref 0» mark, to pencil the measurement mark to insert the material, that will be 80x10 at 70°.



Then insert the material till the mark aligns with «Ref 0» and lower the tread bar and press START.

Change of the tool's head

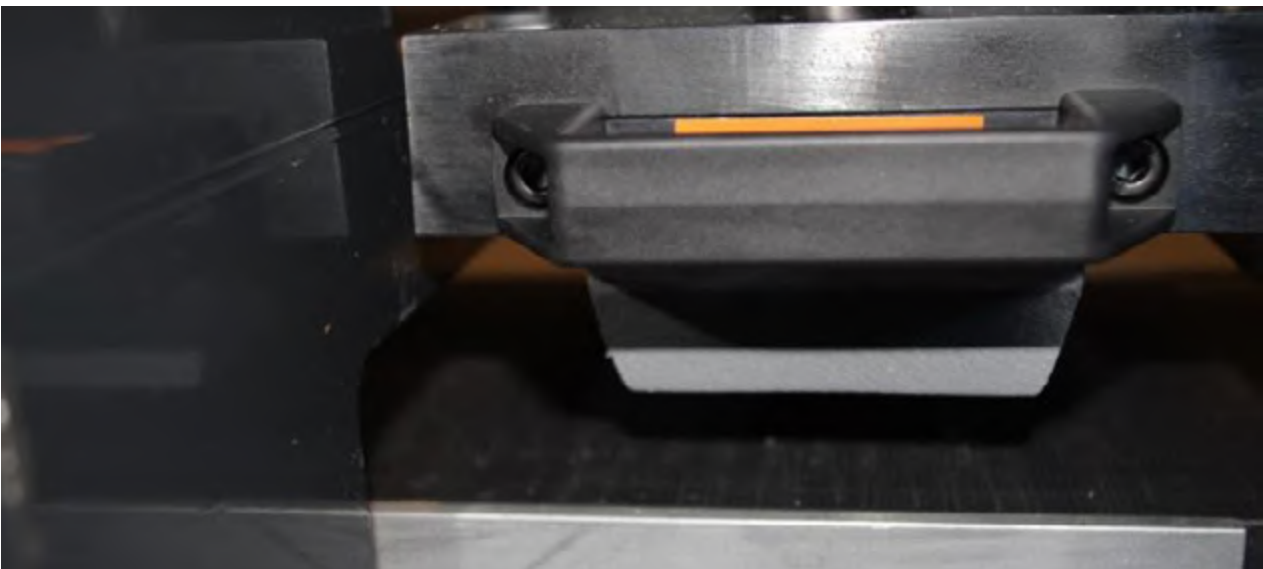
WARNING

WHEN CHANGING THE DIE, IT IS RECOMMENDED TO TURN OFF THE EQUIPMENT USING THE BUTTON OFF SWITCH FOR MAXIMUM SAFETY.

Open the rear door.



Loosen the 2 bolts using a 13mm Allen key.



Remove the die and install the new one.



Tighten the 2 bolts again.

Close the rear door and program the correct gauge on MENU STEP... OK

NOTE :

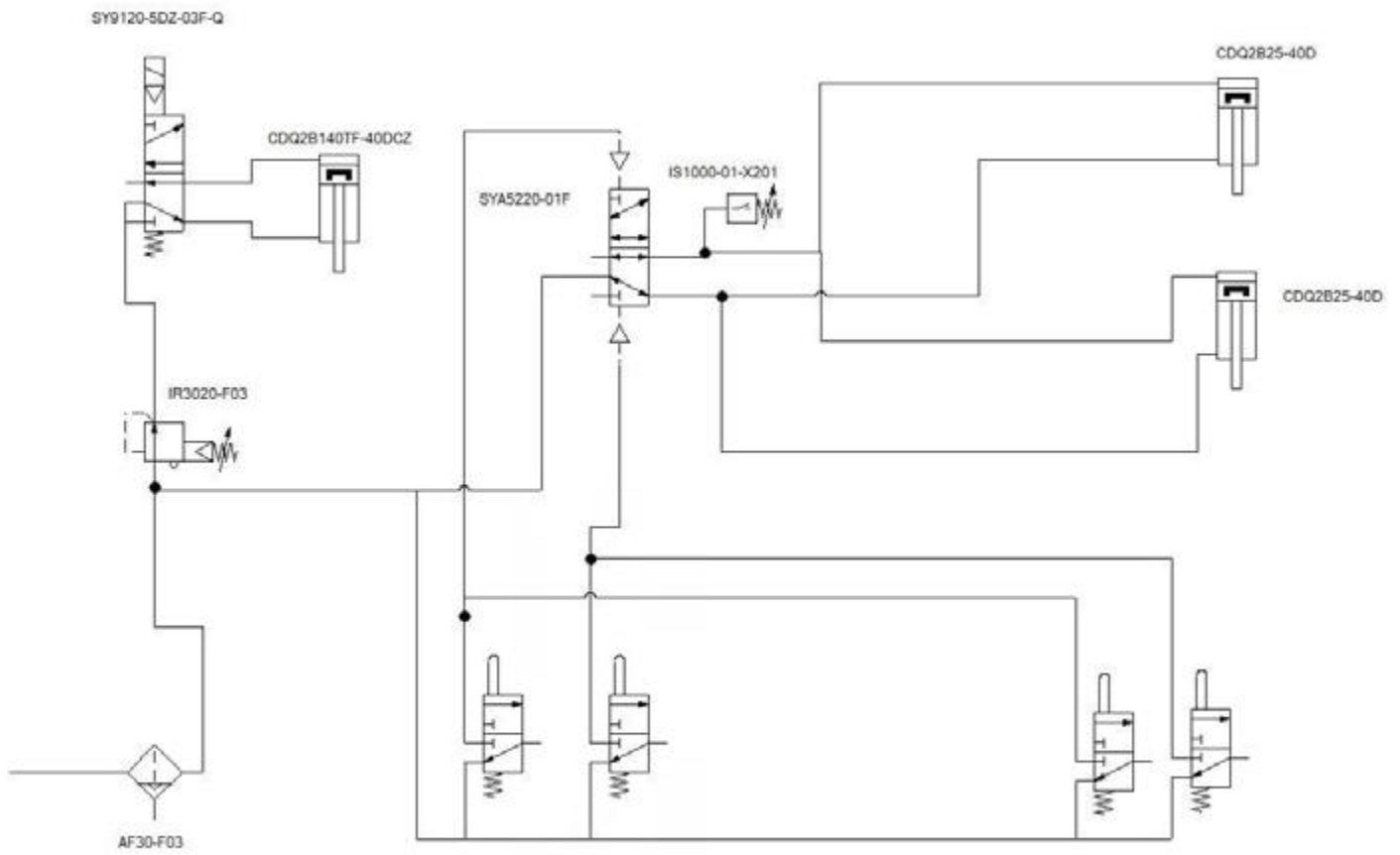
You must adjust the cutting pressure for each type of die or material.

Otherwise, excessive pressure may cause the blades to break or the cutting nylon to deteriorate.

Care and Maintenance :

- Turn or change the polypropylene table when the surface is impaired, to do this, turn off the machine and loosen the knob displacement
- After this, open the door and replace this table for a new one
- Maintain the ball screw always greased
- Change the blades if the dies are damaged.

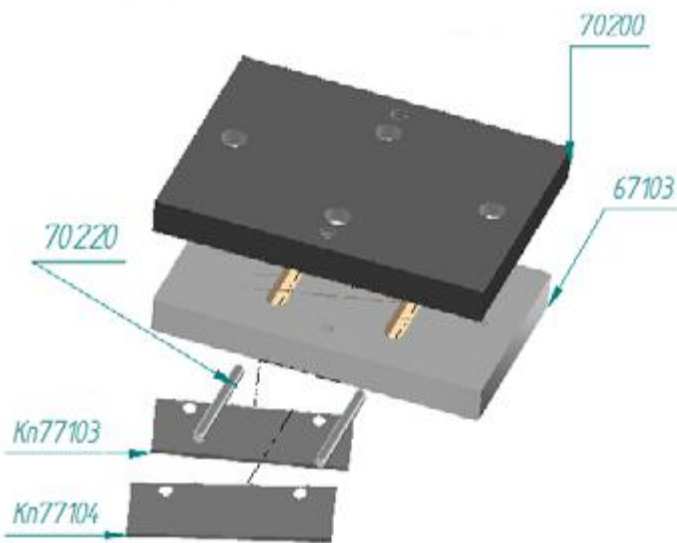
Pneumatic drawing



Spare parts

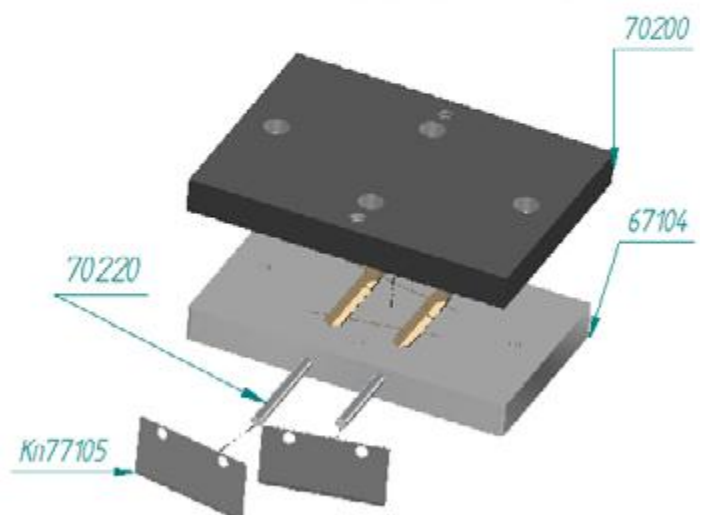
PUNCHING PLATE 80x10 at 70°

Number	Part name	Units
Kn77103	Blade 0.7x79.5-70	1
Kn77104	Blade 0.7x82.5-70	1
70200	Spacer die 120 DC	1
70220	Pin die	2
67103	DIE 80x10-70	1



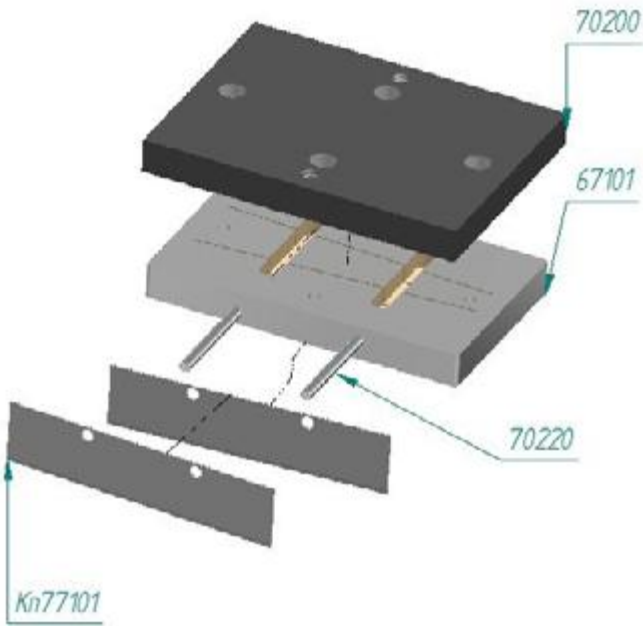
PUNCHING PLATE 50X20

Number	Part name	Units
Kn77105	Blade 0.7x52.5	2
70200	Spacer die 120 DC	1
70220	Pin die	2
67104	DIE 80x20	1



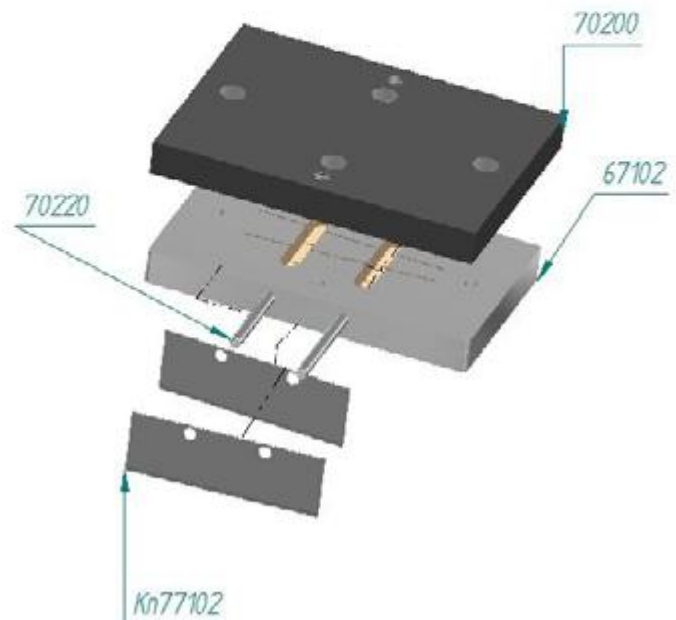
PUNCHING PLATE 120X15

Number	Part name	Units
Kn77101	Blade 0,7x122xdouble bezel normal	2
70200	Spacer die 120 DC	1
70220	Pin die	2
67101	DIE 120x15	1

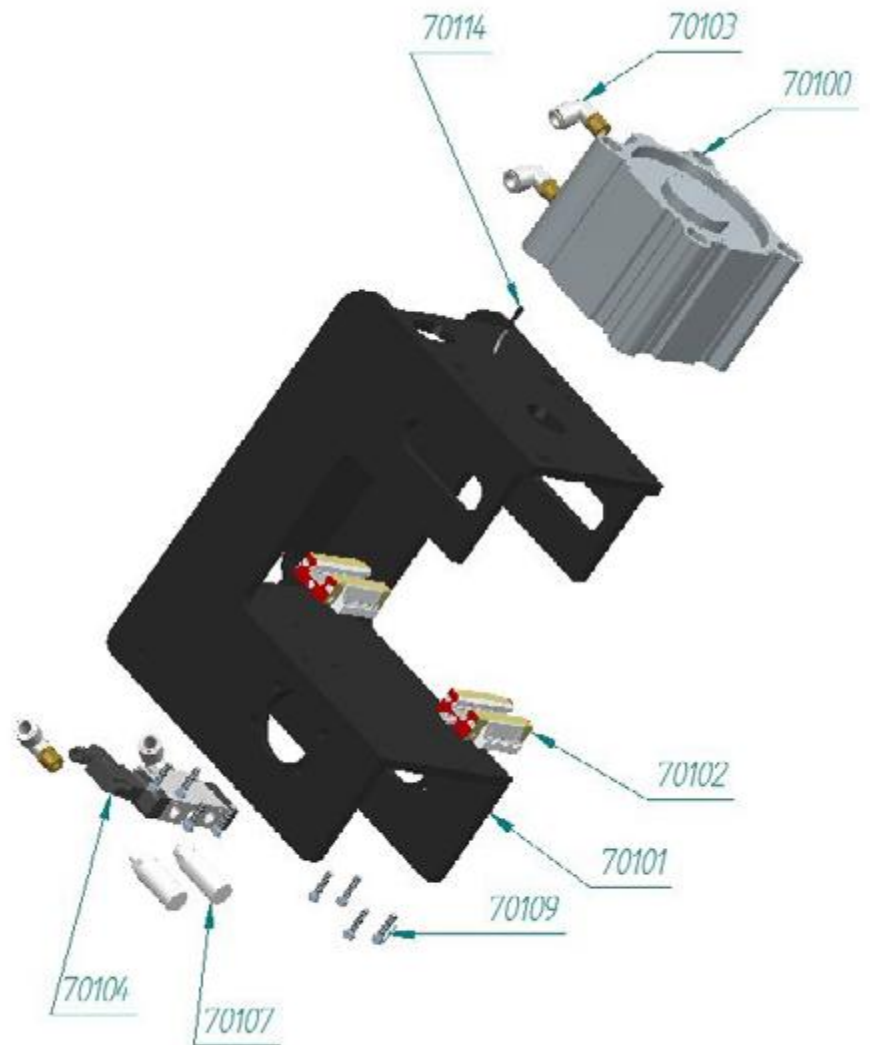


PUNCHING PLATE 80X10

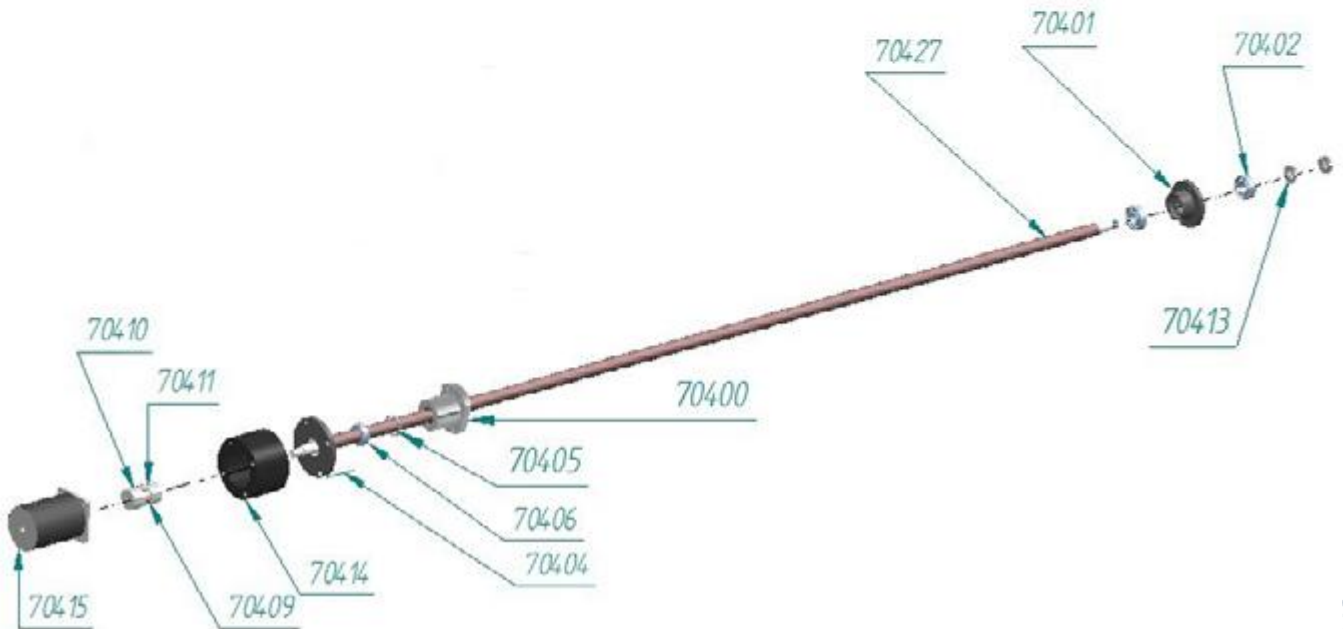
Number	Part name	Units
Kn 77102	Blade 0,7x82xdouble bezel normal	2
70200	Spacer die 120 DC	1
70220	Pin die	2
67102	DIE 80x10	1



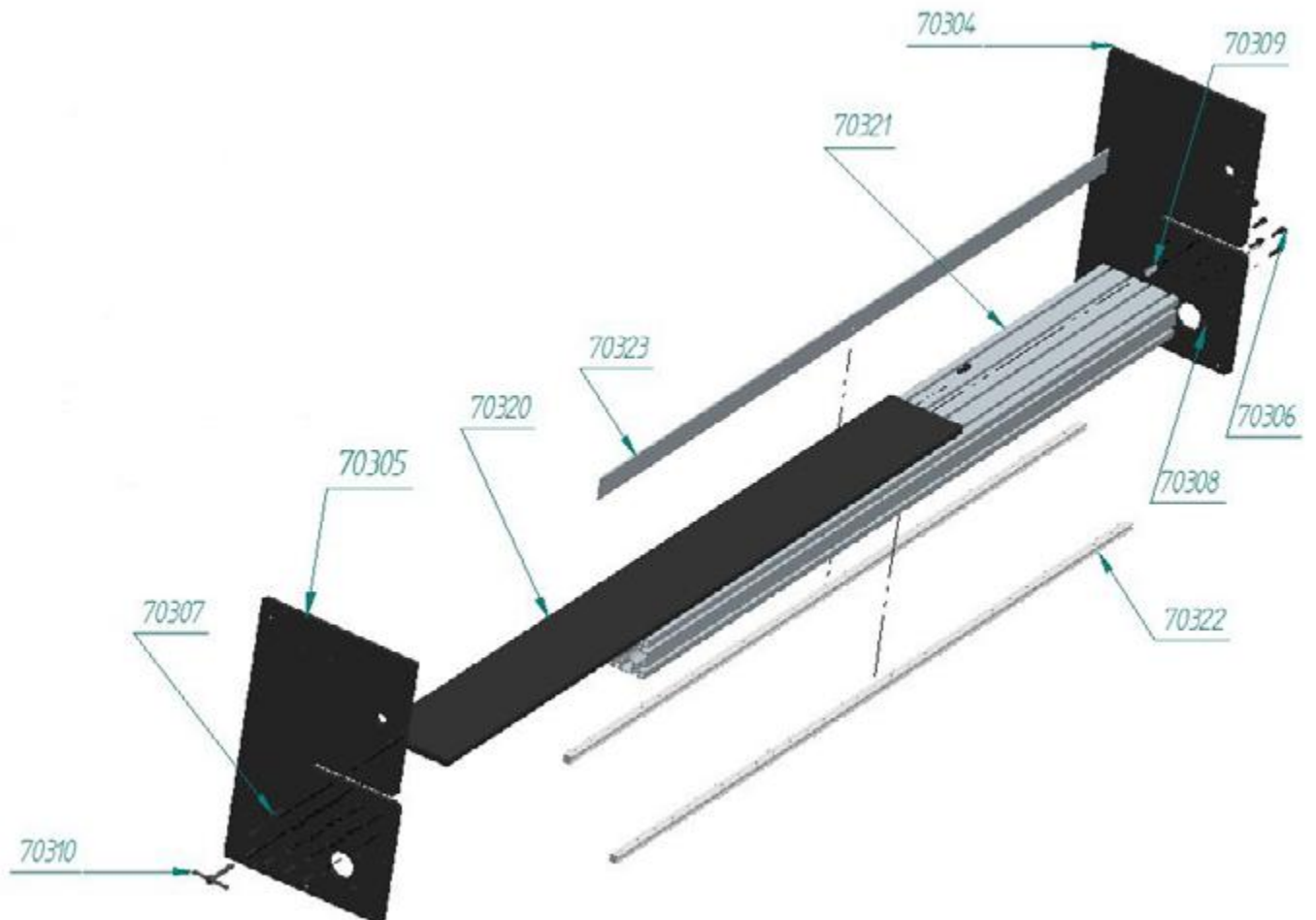
Number	Part name	Units
70100	CD Q2B140TF-40DCZ	1
70101	Head CD1500	1
70102	Slide Hiwin 20	2
70103	KQ2L 12 -03S	5
70104	SY9120-50Z-03	1
70105	Screw_DIN_912_M14x50_v10.00	4
70107	ANA1-02	2
70109	Screw_DIN_912_M6x25_v10.00	8
70114	D-A93	1



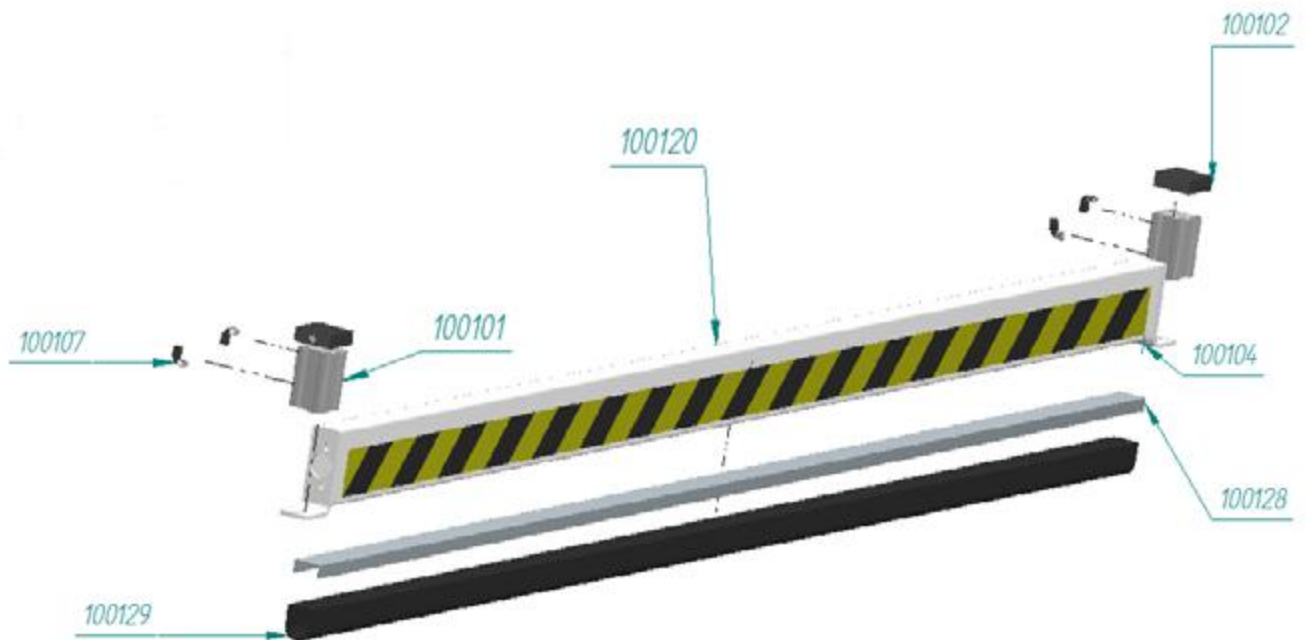
Number	Part name	Units
70400	Flange spindle nut	1
70401	FLANGE BOARD 2	1
70402	Bearing_DIN_628_1_1993_7204_B_v9.00.	2
70404	FLANGE BOARD	1
70405	Guard_ring_B_DIN_472_40x1.75_A_v10.00	1
70406	6004 20-42-12	1
70427	Spindle DC2000	1
70408	es_f_19_24_d_6_6	1
70409	es_f_19_24_d_6_6_01	1
70410	es_f_19_24_d_6_6_02	1
70411	es_f_19_24_d_6_6_03	1
70412	Flange Spindle	1
70413	nut_07590-118	2
70414	Engine spacer	1
70415	Engine Steep	1



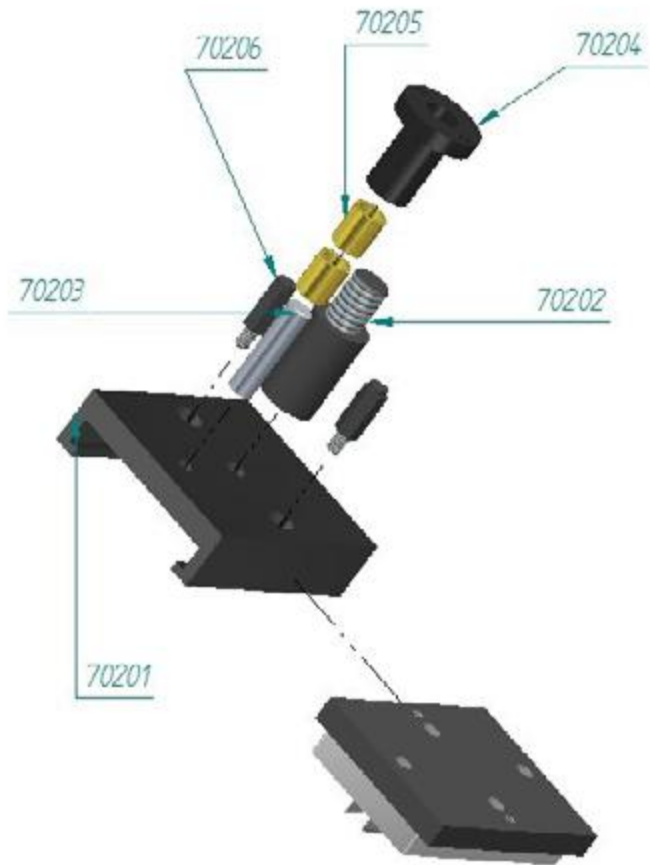
Number	Part name	Units
70304	Lateral pod final	1
70305	Lateral pod	1
70306	Screw_ON_912_M8x30_10.00	17
70307	Screw_ON_912_M10x25_10.00	2
70308	Screw_ON_912_M8x25_10.00	2
70309	Press spring	1
70310	Pod_screw_06150-110x70	1
70320	Polypropylene	1
70321	20_1013_0_0-2350	1
70322	Rail_HGR20R001171_2200	2
70323	Bump bar	1



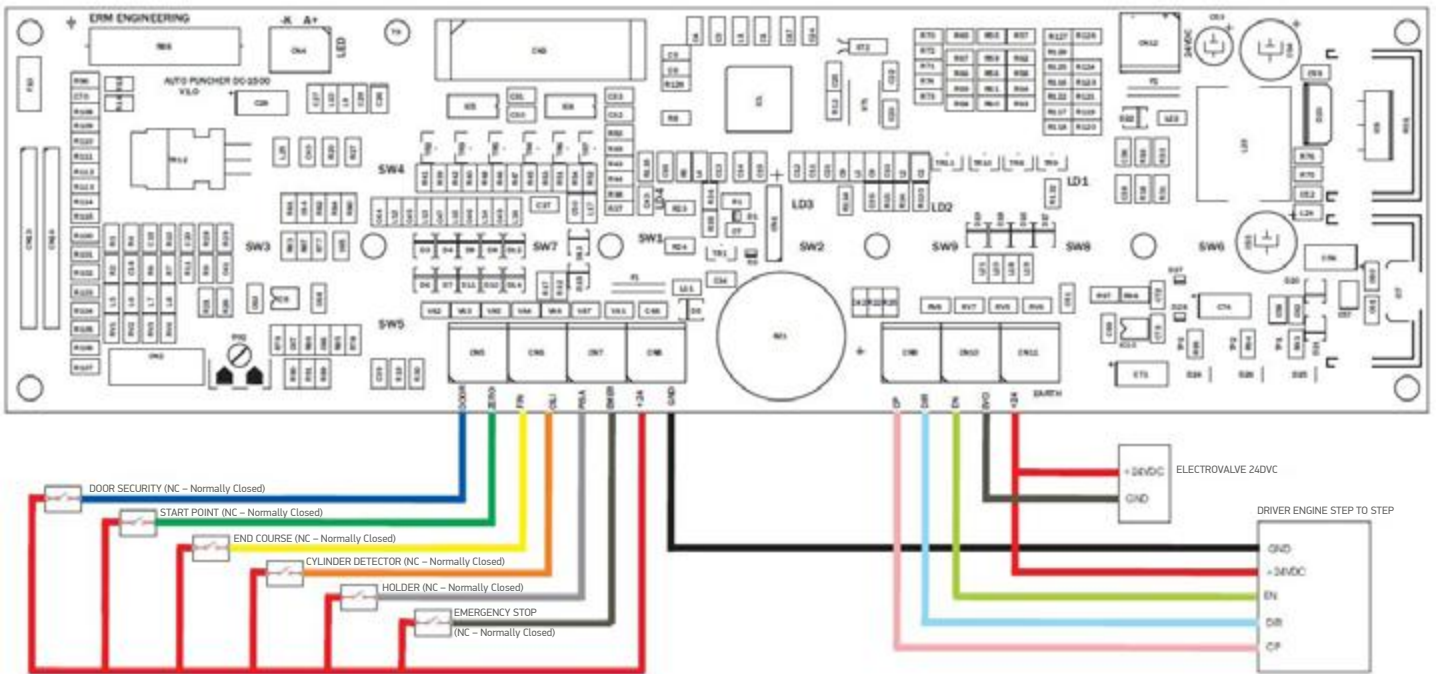
Number	Part name	Units
100101	CQ2B25_400_0_	2
100102	HOLDER board CQ2	2
100104	HOLDER tape	1
100107	KQ2L04_MS	4
100120	HOLDER bar	1
100128	HOLDER aluminium	1
100129	HOLDER rubber	1

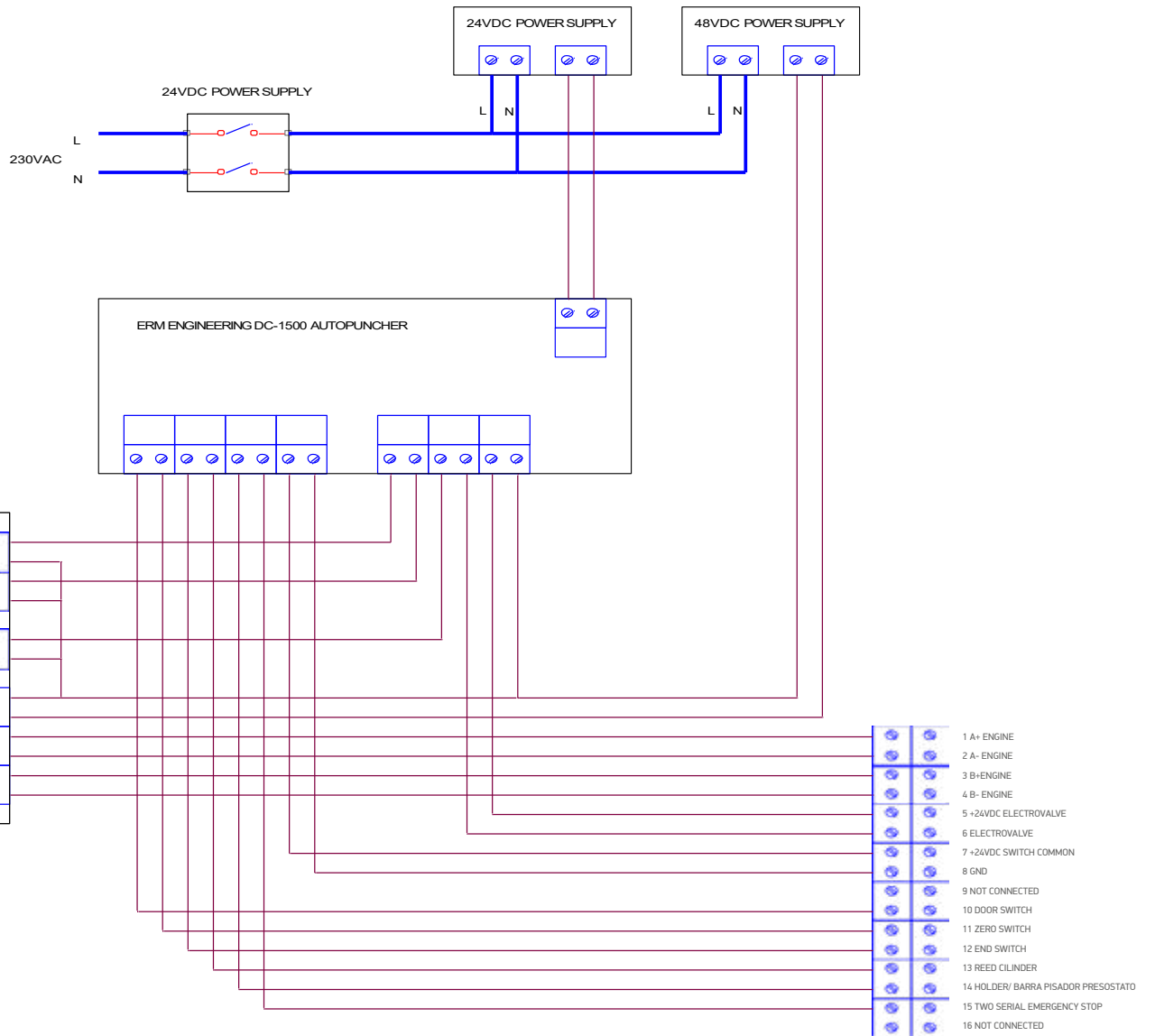


Number	Part name	Units
70201	Spacer base	1
70202	Die link	1
70203	Head guide	1
70204	Saparate head guide	1
70205	Selfail 15x20x25	2
70206	Die head screw	2



Electrical drawing





HOTLINE MLT service



Our MLT representatives will assist you remotely by video

The **HOTLINE MLT** service is at your disposal to assist you live in the resolution of any problems you may encounter :

belt rupture, a rip or any other problem on your conveyor belt, we can help you free of charge, remotely through video.

Our teams are available to answer your questions in **10 languages!**

Register online so that one of our representatives can contact you and help you as soon as possible:

www.mlt-lacing.com/mlt-hotline



hotline pre-registration
www.mlt-lacing.com/mlt-hotline



DIE CUTTER DC200

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